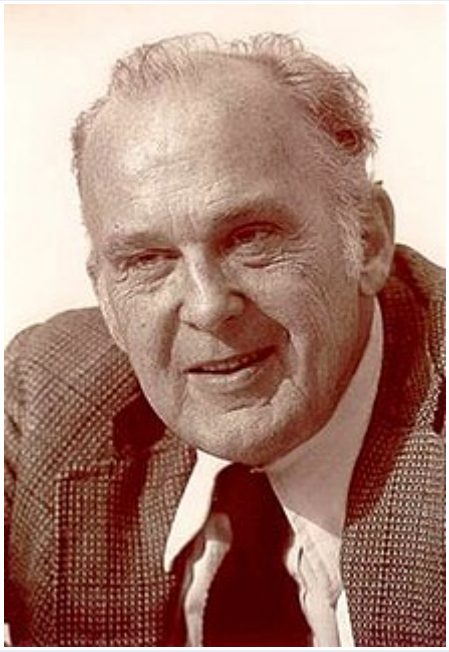
Donald T. Campbell

Donald Thomas Campbell (November 20, 1916 – May 5, 1996) was an American social scientist. He is noted for his work in methodology. He coined the term "evolutionary epistemology" and developed a selectionist theory of human creativity. A *Review of General Psychology* survey, published in 2002, ranked Campbell as the 33rd most cited psychologist of the 20th century.[1]

Donald T. Campbell



Born	November 20, 1916 Grass Lake, Michigan
Died	May 5, 1996 (aged 79) Bethlehem, Pennsylvania
Nationality	American
Alma mater	University of California, Berkeley
Scientific career	
Fields	Psychology, social science
Institutions	Lehigh University Northwestern University

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Biography

Campbell was born in 1916, and completed his undergraduate education in psychology at the University of California, Berkeley, where he and his younger sister, Fayette, graduated first and second, respectively, in the class of 1939.

After serving in the U.S. Naval Reserve during World War II, he earned his doctorate in psychology in 1947 from the University of California, Berkeley. He subsequently served on the faculties at Ohio State, the University of Chicago, Northwestern, and Lehigh.

He taught at Lehigh University, which established the Donald T. Campbell Social Science Research Prizes. Prior to that he was on the faculty of Maxwell School of Syracuse University, 1979–1982, and Northwestern University from 1953 to 1979. He gave the William James Lecture at Harvard University in 1977. In June 1981, working with Alexander Rosenberg, Campbell organized an international conference held at Cazanovia, New York, to formulate the program of what he called an "Epistemologically Relevant Sociology of Science" (ERRES). By Campbell's own account, this project was at least premature.[2]

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Campbell was elected to the National Academy of Sciences in 1973. In 1975, Campbell served as President of the American Psychological Association.

Among his other honors, he received the American Psychological Association's Distinguished Scientific Contribution award, the Distinguished Contribution to Research in Education award from the American Educational Research Association, and honorary degrees from the Universities of Michigan, Florida, Chicago, and Southern California.

Work

Campbell made contributions in a wide range of disciplines, including psychology, sociology, anthropology, biology, statistics, and philosophy.

A major focus throughout his career was the study of false knowledge, biases, and prejudices, and how these relate to matters ranging from race relations to academic disciplines where erroneous theories are perpetuated by those with vested interests in them.

Multitrait-multimethod matrix

Campbell argued that the sophisticated use of many approaches, each with its own distinct but measurable flaws, was required to design reliable research projects and to ensure convergent and discriminant validity. The paper he wrote with Donald W. Fiske to present this thesis, "Convergent and Discriminant Validation by the Multitrait-Multimethod Matrix",[3] is one of the most frequently cited papers in the social science literature.

Blind variation and selective retention

Blind variation and selective retention (BVSR) is a phrase introduced by Campbell to describe the most fundamental principle underlying cultural evolution.[4] In cybernetics, it is seen as a principle for describing change in evolutionary systems in general, not just in biological organisms. For example, it can also be applied to scientific discovery, memetic evolution, or genetic programming. As such, it forms a foundation for what has later been called universal Darwinism.

Evolutionary epistemology

Applying the BVSR principle to the evolution of knowledge, Campbell founded the domain of evolutionary epistemology.[5] This can be seen as a generalization of Karl Popper's philosophy of science, which conceives the development of new theories as a process of proposing conjectures (blind variation) followed by the refutation (selective elimination) of those conjectures that are empirically falsified. Campbell added that the same logic of blind variation and selective elimination/retention underlies all knowledge processes, not only scientific ones. Thus, the BVSR mechanism explains creativity, but also the evolution of instinctive knowledge, and of our cognitive abilities in general.

"The Experimenting Society"

Campbell also had a vision for how public policy could be improved through use of experimentation. He argued for a more collaborative method of public policy that involved various stakeholders and that used experimentation and data as a guide for decision making. The vision of this was laid out in his essay,

"The Experimenting Society".[6]

His research and book *Experimental and Quasi-Experimental Designs for Research* became the standard in policy evaluation circles. Campbell did not start out intending to be a program evaluator, but his devotion to understanding causality, human behavior, and how to solve social questions led him there.[7]

"Ethnocentrism of Disciplines and the Fish-Scale Model of Omniscience"

Campbell wrote an article in 1969 arguing that an obstacle to a "comprehensive, integrated multiscience" was that different areas of the behavioral sciences were clustered together and separated from other areas. That is, there was "a redundant piling up of highly similar specialties leaving interdisciplinary gaps". He wrote that often the approach taken to dealing with these gaps was to encourage multidisciplinary scholars, meaning those who are knowledgeable and competent in multiple areas, but that this was ill-guided because the level of knowledge that makes for good scholars requires specialisation. In his view, a wiser approach would be "invent[ing] alternative social organizations that will permit the flourishing of narrow interdisciplinary specialties." These interdisciplinary specialties would then fill in the gaps between disciplines.[8]

Further development of Campbell's ideas

In the 1990s, Campbell's formulation of the mechanism of "blind-variation-and-selective-retention" (BVSR) was further developed and extended to other domains under the labels of "universal selection theory"[9] or "universal selectionism"[10] by Gary Cziko,[11][12] Mark Bickhard,[13] and Francis Heylighen.[14][15]

Selected works

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See also

- Campbell's Law
- Downward causation
- American philosophy
- Entitativity

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External links

- Selection Theory Bibliography (https://web.archive.org/web/20051125030008/http://faculty.ed.uiuc.edu/g-cziko/stb/default.asp): by Gary A. Cziko and Donald T. Campbell
- Lehigh Memorial (http://www.lehigh.edu/~bm05/Campbell/memorial.htm): at Lehigh University
- Obituary (http://www.lehigh.edu/~bm05/Campbell/obituary.htm) in the New York Times

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